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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/640,729	08/17/2000	Axel Hertwig	PHD-99.107	4820

7590

03/18/2003

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EXAMINER

PHAN, RAYMOND NGAN

ART UNIT	PAPER NUMBER
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2181

DATE MAILED: 03/18/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/640,729

Applicant(s)

HERTWIG ET AL.

Examiner

Raymond Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Part III DETAILED ACTION

Notice to Applicant(s)

1. This application has been examined. Claims 1-16 are pending.
2. The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 2181.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

4. Claims 1-16 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1 (page 8, line 6), using the phrase, "...the first processor...", lacks proper anteceded basis and causes the claim to be vague and indefinite.

As per claim 1 (page 8, line 8), using the phrase, "...the second processor...", lacks proper anteceded basis and causes the claim to be vague and indefinite.

5. The remaining claims, not specifically mentioned, are rejected for incorporating the defects from the parent claim by dependency.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claims 1-5, 9-12, 16 are rejected under 35 U.S.C. § 102(e) as being anticipated by Nakagawa et al. (US No. 6,353,863).

In regard to claim 1, Nakagawa et al. disclose a multiprocessor system comprising at least two processors 400, 413 (see figure 4); at least one rewritable memory 430 to which two processors can have accessed; at least one cache memory 404, 405 via which the first processor has access to the memory (see figure 4, col. 8, lines 32-67); and at least one bridge via the second processor has accessed to the memory 421 (see figure 4).

In regard to claim 2, Nakagawa et al. disclose wherein the two processor work with independently (see col. 8, lines 32-40).

In regard to claim 3, Nakagawa et al. disclose wherein the first processor is the DSP 400 and the second processor is the core processor 413 (see figure 4; col. 8, lines 32-50).

In regard to claim 4, Nakagawa et al. disclose wherein the memory is connected to the first processor via two cache memories 404, 405, one used for access to the memory for reading a program and the other of which is used for access to the memory for reading out data (see figure 4).

In regard to claim 5, Nakagawa et al. disclose wherein the memory that each of processors is assigned a separate memory area for a program and data (see col. 12, line 50 through col. 13, line 20).

In regard to claim 9, Nakagawa et al. disclose wherein the data memory 418 integrated on a chip is connected to the second processor via the data bus (see figure 4).

In regard to claim 10, Nakagawa et al. disclose wherein for enabling the access of the first processor to the data memory on the chip of DMA controller and second bridge are provided (see col. 8, lines 48-67).

In regard to claim 11, Nakagawa et al. disclose wherein the first processor is assigned to at least an internal high-speed data memory 404, 405 (see figure 4).

In regard to claim 12, Nakagawa et al. disclose the DSP chip formed by DSP and memory has a Harvard architecture in that it includes separate X data bus 411 and Y data bus 412 (see figure 4).

In regard to claim 16, Nakagawa et al. disclose wherein the operation of a telecommunication terminal device of mobile telephony (see col. 9, lines 26-42).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as

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a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 8 and 13-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakagawa et al. in view of Elabd (US NO. 6,526,426).

In regard to claim 8, Nakagawa et al. disclose the claimed subject matter as discussed above rejection except the teaching of wherein the bridge is provided for managing the access to the memory so that in the case of a conflict of access. However Elabd discloses the MT MMS which is provides for managing the access to the memory so that in the case of a conflict of access (see col. 9, lines 46-67). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Alabd within the system of Nakagawa et al. because it would increase data processing throughput.

In regarding of claim 13, even though the teaching of Nakagawa et al. do not specifically disclose the memory 430 as a MTP or Flash memory however one skilled in the art would have understood that they can choose to have MTP or Flash memory to provide a value-added service to a mobile communication terminal.

In regarding of claim 14, even though the teaching of Nakagawa et al. do not specifically disclose the memory 418 as a DRAM, however one skilled in the art would have understood that they can choose to have DRAM to provide a value-added service to a mobile communication terminal.

In regarding of claim 15, even though the teaching of Nakagawa et al. do not specifically disclose the memories 404 and 405 as a RAM, however one skilled in the art would have understood that they can choose to have a RAM to provide a value-added service to a mobile communication terminal.

10. Claims 6-7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakagawa et al. in view of Okummura et al. (US NO. 5,974,493).

In regard to claim 6, Nakagawa et al. disclose the claimed subject matter as discussed above rejection except the teaching of the bridge provide for synchronization between the first data bus via the memory communicates, and the second data bus via which the second processor communicates and which has narrower transmission width. However Okummura et al. disclose the buffer arranged between the first data bus B2 connected to the memory and the second data bus B1 connected to the processor which is smaller width (see figure 8, col. 6, lines 6-15). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was made to have combined the teachings of Okummura et al. within the system of Nakagawa et al. because it would provide the processing efficiency to the utmost in a compact size.

In regard to claim 7, Okummura et al. disclose the first data bus is 128 bit width and the second data bus is 32-bit width (see col. 6, lines 6-15).

Conclusion

11. All claims are rejected.

12. The prior arts made of record and not relied upon are considered pertinent to applicant's disclosure.

Ohsuga et al. (US No. 5,867,726) disclose a microcomputer.

Hailpern et al. (US No. 4,881,164) disclose a multi-microprocessor for controlling shared memory.

Sgro et al. (US No. 5,903,771) disclose a scalable multi-processor architecture for SIMD and MIMD operations.

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Landi et al. (US No. 6,163,828) disclose a methods and apparatus for providing multi-processor access to shared memory.

Garde et al. (US No. 5,685,005) disclose a digital signal processor configured for multiprocessing.

Chauvel et al. (EPO No. EP 1 067 461 A1) discloses an unified memory management system for multi process heterogeneous architecture.

Intrater et al. (US No. 5,592,677) disclose an integrated data processing system including CPU core and parallel, independently operating DSP module.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Raymond Phan, whose telephone number is (703) 306-2756. The examiner can normally be reached on Monday-Friday from 6:30AM- 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Primary, Paul Myers can be reached on (703) 305-9656 or via e-mail addressed to paul.myers@uspto.gov. The fax phone number for this Group is (703) 746-7239.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [raymond.phan@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

RR

Raymond Phan
3/12/03



PAUL R. MYERS
PRIMARY EXAMINER